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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,756	02/07/2002	Alexander C. Loui	83990DMW	2944

7590 09/13/2005

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EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/072,756

Applicant(s)

LOUI ET AL.

Examiner

DANIEL G. MARIAM

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-12, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 13-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/14/2002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2 and 11 are objected to because of the following informalities: Claims 2 and 11 recite the limitation "textual", only a cursory of this feature is mentioned on page 3, line 7 of the specification. It appears that the entire specification refers to the extracted features as being one of a texture component. Therefore, the Examiner treated the limitation "textual" to mean "textural" for the purpose of examining the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 and 12 recite the limitation "the parameters" in line 4. There is insufficient antecedent basis for this limitation in the claims.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 8-11 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Derksen, et al. (Using Landsat Thematic Mapper Imagery to Support Salmon Restoration Efforts in a Large Pacific Coast Watershed).

With regard to claim 1, Derksen, et al. discloses a) extracting one or more features, i.e., selecting rectangular regions of the image, from an input image composed of image pixels (See for example, page 6, 2<sup>nd</sup> paragraph); b) performing unsupervised learning based on the extracted

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features to obtain a cluster probability map of the image pixels (See page 6, paragraph 2); c) performing supervised learning based on the extracted features to obtain a class probability map of the image pixels (See page 6, paragraph 3); and d) combining the cluster probability map from unsupervised learning and the class probability map from supervised learning to generate a modified class probability map to determine the semantic class of the image regions (See page 6, paragraph 3 through last paragraph of page 8).

With regard to claim 2, the method as claimed in claim 1 wherein the extracted features include color and textual features (See for example, page 6, paragraph 2; and Figs. 1 and 2).

With regard to claim 8, the method as claimed in claim 1 wherein step a) comprises the step of extracting and computing low-level features *selected from* the group including color, texture, shapes, and wavelet coefficients from the input image (See page 6, paragraph 2, line 3; and Figs. 1-2).

With regard to claim 9, the method as claimed in claim 1 wherein step a) comprises the step of detecting and extracting semantic-level features *selected from* the group including faces, people, and *structures* the input image (See page 11, paragraph 1).

Claim 10 is rejected the same as claim 1. Thus, argument analogous to that presented above for claim 1 is applicable to claim 10. Derksen, et al. further discloses a computer program product for classification of image regions by probabilistic merging of a class probability map and a cluster probability map comprising: a computer readable storage medium having a computer program stored thereon for performing the steps of claim 1 (See for example, pages 5-6, last paragraph, lines 1-10).

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Claim 11 is rejected the same as claim 2. Thus, argument analogous to that presented above for claim 2 is applicable to claim 11.

Claims 17 and 18 are rejected the same as claims 8 and 9 respectively. Thus, argument similar to those presented above for claims 8 and 9 are respectively applicable to claims 17 and 18.

### ***Allowable Subject Matter***

5. Claims 4-7 and 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art Derksen, et al. does not teach or fairly suggest any one of the limitations recited in claims 4-7 and 13-16, and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 5548697, 6226408, 6763303, and 6892193; publications to: Yang, et al. "Learning approaches for detecting and tracking news events"; Tarassenko, et al. "Supervised and unsupervised learning in radial basis function classifiers"; Greenspan, et al. "Texture analysis via unsupervised and supervised learning"; and Lee, et al. "Supervised fuzzy art: training of neural network for pattern classification via combining supervised and unsupervised learning".

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH M. MEHTA can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DANIEL G MARIAM  
Primary Examiner  
Art Unit 2625

September 8, 2005